

**AMENDMENTS TO THE DRAWINGS**

The Applicants have amended FIG. 14 to include the notation for the depth of the sample cavity. Support for this may be found at, for example, page 8, lines 7-17 of the patent application. No new matter has been entered. The Applicants are submitting Replacement and Annotated Drawings on the same herewith.

Enclosures: Replacement Sheet  
Annotated Sheet

### REMARKS

Claims 1-14 and 21-24 are currently pending in this application. Claims 1, 5, 6, 8, 9, 11 and 22-24 have been amended. Claims 25-27 have been added. Claim 7 has been cancelled without prejudice. No new matter has been added. Reconsideration of the pending claims is respectfully requested.

#### Amendments to the Drawings

The Applicants have amended FIG. 14 to include the notation for the depth ( $d_{sc}$ ) of the sample cavity. Support for this may be found at, for example, page 8, lines 7-17 of the patent application. No new matter has been entered. A clean copy and an annotated copy of the same have been submitted herewith. The Applicant respectfully requested that the amended FIG. 14 replace the original FIG. 14 in the patent application.

#### 35 U.S.C. § 112 Rejections

Claim 6 was rejected under § 112 as having no antecedent basis for the recitation of “said lid adjacent said sample cavity”. The Applicant has amended claim 6 as suggested in the Office Action at page 2 by amending to the phrase to “said lid is adjacent said sample cavity and is provided with a reagent thereon.” Claim 7 has been cancelled so this § 112 rejection is rendered moot.

Claims 11 and 12 have been rejected under § 112 in which the height of the light inputs and the light transmission segments are said to be undefined. Page 3 of the Office Action. The Applicants have amended claim 11 to recite that the following: “the input light guide height extending from a bottom surface to a top surface, the light transmission segment extending from a bottom surface to a top surface.” A non-limiting example of the height segments are shown in FIGs. 7 and 8 in which “a light transmission segment 36 . . . extends beyond the dimensions of the input light guide 12 and output light guide 14”. Page 7, lines 13-15 of the patent application. Thus, the § 112 claims rejections of claims 11 and 12 should be withdrawn.

Claims 22-24 have been rejected under § 112 in which the widths of the main cavity portion and the venting cavity are said to be undefined. Page 3 of the Office Action. Claims 22-24 have been amended to include “the main cavity portion width extending from a first side to a second side” and/or “the venting cavity width extending from a first side to a second side”. A non-limiting example of the width of the venting cavity and the width of the main

cavity is shown in FIG. 14 with respective  $W_{VC}$  and  $W_{MC}$ . See also page 8, lines 9-14 of the patent application. Thus, the § 112 claims rejections of claims 22-24 should be withdrawn.

### 35 U.S.C. § 103 Rejections

#### Independent Claim 1

Independent Claim 1 recites, *inter alia*, (a) “an input reflector in an enclosed optical communication path with said input light guide”; (b) “an output light guide in an enclosed optical communication path with said output reflector” and (c) “the format further includes a reagent therein.” A non-limiting embodiment of an input light guide in enclosed optical communication with a light input is shown in FIG. 1 of the patent application with input light guide 12 and input reflector 18. The applied reference of U.S. Patent No. 4,803,992 to Lemelson (“Lemelson”) does not disclose, teach or suggest such limitations.

Specifically, Lemelson discloses a flexible light pipe 22 that initially transports light. See FIG. 1; col. 3, lines 45-62. The end of the light pipe 22 is formed with a lens 23. *Id.* The light leaves the end of the light pipe 22 before contacting the reflecting surface 14. See FIG. 1; col. 3, lines 45-62; col. 4, lines 25-30. Thus, Lemelson’s light pipe is not an enclosed optical communication path because of the space between the end of the light pipe 22 and the reflecting surface 14. Similarly, the end (with lens 29) of the light pipe 28 is not an enclosed optical communication path with reflecting surface 15. See FIG. 1; col. 3, lines 45-62; col. 4, lines 25-30. Additionally, Lemelson does not disclose teach or suggest the claimed reagent in the format. As acknowledged in the Office Action at page 4, Lemelson discloses that “the front end portion 13 . . . allows light energy to be directed therethrough to scan fluent material, such as body fluid existing in the cavity.” See also col. 3, line 38 – col. 4, line 2; FIG. 1. Lemelson, however, does not teach or suggest having reagent in its catheter. Rather, Lemelson discloses diverse allegedly potentially uses ranging from fluid pressure in the body duct, observing condition of the body tissue, condition of blood vessels, contents of the digestive tract, and composition of blood and body tissue. See col. 1, lines 8-14 of Lemelson.

The other applied reference of EP 0254246 A2 to Meserol (“Meserol”) does not include (a) “an input reflector in an enclosed optical communication path with said input light guide”; and (b) “an output light guide in an enclosed optical communication path with said output reflector”. The Office Action states that “Meserol also discloses integrally formed optical elements, such as light beam 30 from source 32, which passes through the cuvette (input light guide is defined in the optically transmissive portion of the cuvette where light enters from source 32) . . . and back out through the sample cuvette (output light guide is

defined in the optically transmissive portion of the cuvette where light is reflected back and out of the cuvette). . . .” Page 5 of the Office Action. The Applicants respectfully disagree. Meserol does not disclose any input or output light guide, let alone the claimed input and output light guides of claim 1. This is clearly shown in, for example, FIGs. 5 and 6 and corresponding description of Meserol.

The other applied references of U.S. Patent No. 6,001,307 to Naka (“Naka”), which has been applied to claim 6 in combination with Meserol, does not address the deficiencies in Meserol as discussed.

Therefore, independent claim 1 should be not be anticipated by or rendered obvious over Lemelson, Meserol, Naka or any combination thereof. Thus, claim 1 should be allowable. Dependent claims 2-6, which depend either directly or indirectly on claim 1, also should not be anticipated by or rendered obvious over Lemelson, Meserol, Naka or any combination thereof. Thus, claims 2-6 should also be allowable.

#### Independent Claim 8

Independent Claim 8 recites, *inter alia*, (a) “an enclosed input light guide having an input reflector disposed at one end thereof”; and (b) “an enclosed output light guide having an output reflector disposed at one end thereof.” The applied reference of Lemelson does not disclose, teach or suggest such limitations. For the same reasons as discussed above in connection with claim 1, Lemelson does not have the claimed input light guide and output light guide as recited in claim 8. Also, for the same reasons as discussed above in connection with claim 1, the applied reference of Meserol does not disclose, teach or suggest such limitations. The other applied references of Naka and U.S. Patent No. 5,525,518 to Lundsgaard (“Lundsgaard”), which both have been applied to select dependent claims in combination with Meserol, do not address the deficiencies in Meserol.

Therefore, independent claim 8 should be not be anticipated by or rendered obvious over Lemelson, Meserol, Naka, Lundsgaard or any combination thereof. Thus, claim 8 should be allowable. Dependent claims 9-14 and 21-24, which depend either directly or indirectly on claim 8, also should not be anticipated by or rendered obvious over Lemelson, Meserol, Naka, Lundsgaard or any combination thereof. Thus, claims 9-14 and 21-24 should also be allowable.

#### Independent Claim 25

Independent Claim 25 recites, *inter alia*, (a) “an enclosed input light guide having an input reflector disposed at one end thereof”; (b) “an enclosed output light guide having an output reflector disposed at one end thereof” and (c) wherein the format further includes a

reagent. To expedite prosecution, the Applicant will comment on the applied references with respect to the newly added claim 25. Lemelson does not disclose, teach or suggest such limitations. For the same reasons as discussed above in connection with claims 1 and 8, Lemelson does not have the claimed input and output light guides and the reagent as recited in claim 25. Also, for the same reasons as discussed above in connection with claim 8, Meserol does not disclose, teach or suggest such limitations. The other references of Naka and U.S. Patent No. 5,525,518 to Lundsgaard ("Lundsgaard"), which both have been applied to select dependent claims in combination with Meserol, do not address the deficiencies in Meserol.

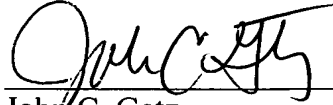
Therefore, independent claim 25 should be not be anticipated by or rendered obvious over Lemelson, Meserol, Naka, Lundsgaard or any combination thereof. Thus, claim 25 should be allowable. Dependent claims 26 and 27, which depend directly on claim 25, also should not be anticipated by or rendered obvious over Lemelson, Meserol, Naka, Lundsgaard or any combination thereof. Thus, claims 26 and 27 should also be allowable.

**CONCLUSION**

The Applicant submits that the claims are in a condition for allowance and action toward that end is earnestly solicited. It is believed that no fees are due; however, should any fees be required (except for payment of the issue fee), the Commissioner is authorized to deduct the fees from the Nixon Peabody Deposit Account No. 50-4181 (247082-000036USPT).

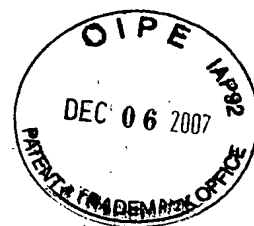
December 3, 2007  
Date

Respectfully submitted,

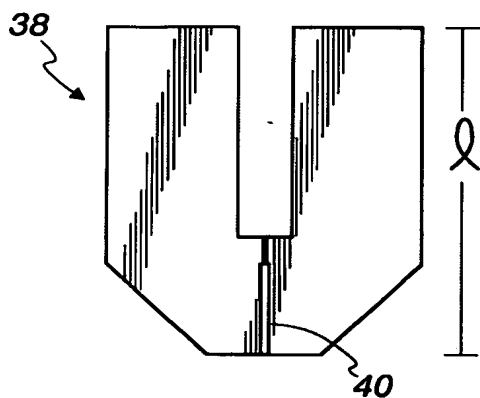


John C. Gatz  
Registration No. 41,774  
NIXON PEABODY LLP  
161 North Clark Street, Suite 4800  
Chicago, Illinois 60601  
(312) 425-3900 - Telephone  
(312) 425-3909 - Facsimile

ATTORNEY FOR APPLICANT

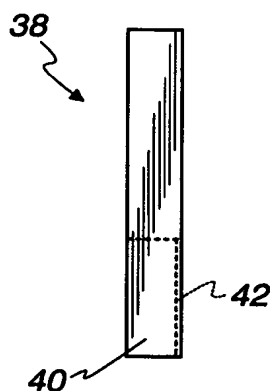


*Fig. 9*

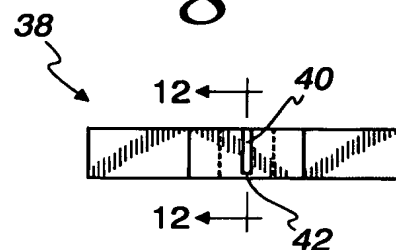


3/3

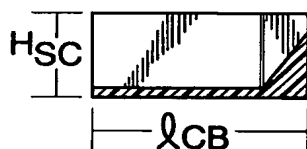
*Fig. 10*



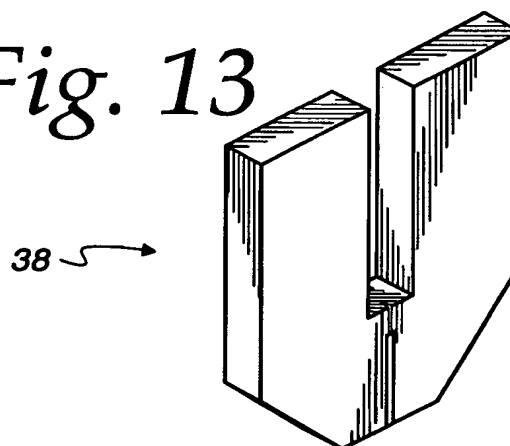
*Fig. 11*



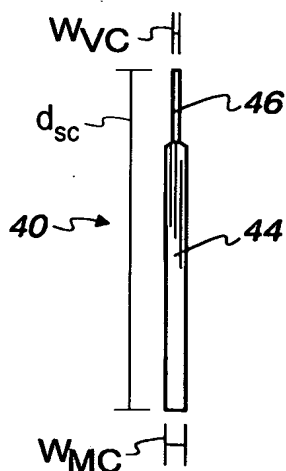
*Fig. 12*



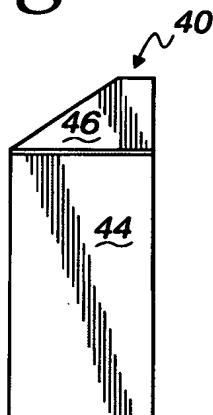
*Fig. 13*



*Fig. 14*



*Fig. 15*



*Fig. 16*

